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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,580	12/12/2003	Karl B. Fielhauer	1876-97271	2560
26085	7590	06/05/2006	EXAMINER	
THE JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY OFFICE OF PATENT COUNSEL 11100 JOHNS HOPKINS ROAD MAIL STOP 7-156 LAUREL, MD 20723-6099			GESESSE, TILAHUN	
		ART UNIT	PAPER NUMBER	
		2618		
DATE MAILED: 06/05/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/735,580	FIELHAUER ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Tilahun B. Gesessse	2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-16 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_ is/are allowed.  
 6) Claim(s) 1-5,10,11 and 16 is/are rejected.  
 7) Claim(s) 6-9 and 12-15 is/are objected to.  
 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. _____.   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/12/03</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____.                                   |

## DETAILED ACTION

### ***Specification***

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5,10-11 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Robert Jensen et al (IEEE VOL. 35 No.3 - transactions on aerospace and electronic system ,July 1999).

Claims 1 ,10 and 16, Jensen teaches a system (see fig. 1,page 964, spacecraft transmitter not coherent with uplink signal but a frequency comparison made on the space craft and includes in telemetry , the comparator is used on the ground to correct Doppler measure,) including a local station (spacecraft ) and a remote station (ground station), the local station including a receiver capable of operating in an unlocked state when not tracking an uplink signal, the unlocked state corresponding to a best lock frequency (BLF) of the receiver, see fig.1, wherein spacecraft receives uplink signal in non coherent and measures the signal values (N1 and N2,) see page 967 para 15) a

method of remotely monitoring the BLF, see fig.1, wherein spacecraft receives uplink signal in non coherent and measures the signal values (N1 and N2,) see page 967 para 15 and the spacecraft carries neither a high stable oscillator nor a coherent transponder see page 964 2<sup>nd</sup> paragraph through 3<sup>rd</sup> paragraph) comprising:

Jensen teaches in the local station, operating the receiver in the unlocked state corresponding to the BLF (see fig.1, wherein spacecraft receives uplink signal in non coherent and measures the signal values (N1 and N2,) see page 967 para 15).

Jensen teaches in the local station, deriving data indicative of a ratio of the BLF to a reference frequency of the receiver (the receiver of fig.2, page 966, para 12).

Jensen teaches telemetering the data indicative of the ratio from the local station to the remote station (See page 968, telemetry data transmitted to ground stations and figure 1).

Jensen teaches in the remote station (ground station, ), estimating the BLF based on the telemetered data indicative of the ratio, and a predetermined estimate of the reference frequency, to produce an estimated BLF (see page 964 3re paragraph through 5th paragraph).

Claim 2, Jensen transmitting, from the remote station to the local station, an uplink signal having an uplink frequency that will be received at the local station at the estimated BLF and in the local station, locking the receiver to the uplink frequency (see fig.1).

Claims 3-4, Jensen teaches the estimated BLF(see page 964 3re paragraph through 5 th paragraph).

Claim 5, Jensen teaches the BLF is the uplink frequency that, if received at the receiver, would cause the receiver to transition from the unlocked state to a locked state in a minimum amount of time (see page 964 3re paragraph through 5th paragraph).

Claim 11, it is system claim which corresponds to claim 1 above. It is analyzed and rejected for the same reason as set forth in the claim.

***Allowable Subject Matter***

4. Claims 6-9 and 12-15 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art (Jensen) does not teach expressly producing a first linear combination frequency as a first linear combination of the BLF and the reference frequency; producing a second linear combination frequency as a second linear combination of the BLF and the reference frequency; repeatedly counting cycles of the first linear combination frequency to produce successive first count values; and repeatedly counting cycles of the second linear combination frequency to produce successive second count values corresponding to the successive first count values, wherein the successive first and second count values represent the data indicative of the ratio.

### Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tilahun B Gesesse whose telephone number is 571-272-7879. The examiner can normally be reached on flexible schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on 571-272-7899.

The Central FAX Number is 571-273-8300. For patent related correspondence, hand carry deliveries must be made to the Customer Service Window (now located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314), and facsimile transmissions must be sent to the Central FAX number, unless an exception applies.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

5/30/06  
  
TILAHUN GESESS  
PRIMARY EXAMINER